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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/520,574

07/15/2005

Lothar Puppe

CH7779/STA-196

5269

157

7590

09/26/2006

BAYER MATERIAL SCIENCE LLC
100 BAYER ROAD
PITTSBURGH, PA 15205

EXAMINER

NWAONICHA, CHUKWUMA O

ART UNIT

PAPER NUMBER

1621

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/520,574

Applicant(s)

PUPPE ET AL.

Examiner

Chukwuma O. Nwaonicha

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-21 are pending in the application.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 is indefinite because of the phrases "paper retention aid" and "comprising". It is not clear if applicants are claiming a composition or a product. Also, it is not clear what type of "aid" applicants are claiming. Corrections are required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Yates, {US 3,630,954}.

Yates discloses applicants claimed silica sol. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step.

Claims 14-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yates, {US 3,630,954}.

Yates discloses applicants claimed silica sol. It should be noted that zeta potential and the IR band position are inherent properties of SiO₂ or silica sol and do not constitute a patentable distinction.

Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Andersson et al., {US 5,603,805}.

Andersson et al. disclose applicants claimed silica sol. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step.

Claims 14-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Andersson et al., {US 5,603,805}.

Andersson et al. disclose applicants claimed silica sol. It should be noted that zeta potential and the IR band position are inherent properties of SiO₂ or silica sol and do not constitute a patentable distinction.

Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Johansson et al., {US 5,643,414}.

Johansson et al. disclose applicants claimed silica sol. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step.

Claims 14-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Johansson et al., {US 5,643,414}.

Johansson et al. disclose applicants claimed silica sol. It should be noted that zeta potential and the IR band position are inherent properties of SiO₂ or silica sol and do not constitute a patentable distinction.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yates, {US 3,630,954}.

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Applicants claim a process for the preparation of a silica sol comprising reacting a fresh sol with guanidine carbonate in the presence of a base (sodium water glass, potassium water glass, potassium hydroxide, sodium hydroxide and combinations thereof) at a reaction temperature and at a pH of from 8 to 12, the pH being measured at the reaction temperature; wherein all the variables are as defined in the claims

Determination of the scope and content of the prior art (M.P.E.P. §2141.01)

Yates teaches a process for preparing silica sol comprising reacting a fresh sol with guanidine compound in the presence of a base at a reaction temperature not more than 70°C and at a pH of from 10.5 to 12; wherein all the variables are as defined in the specification. See column 8-11.

Ascertainment of the difference between the prior art and the claims (M.P.E.P.. §2141.02)

Yates process of preparation of silica sol by reacting guanidine compound with a sol in the presence of a base differs from the instantly claimed process in that Yates process does not specifically employ guanidine carbonate. Another difference between applicants invention and prior art of Yates is that applicants' process is continuous while Yates is silent about this process condition.

Finding of prima facie obviousness--rational and motivation (M.P.E.P.. §2142-2143)

The instantly claimed process of preparation of silica sol by reacting guanidine compound with a sol in the presence of a base would have been suggested to one of

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ordinary skill because one of ordinary skill wishing to obtain silica sol is taught to employ the processes of Yates.

One of ordinary skill in the art would have a reasonable expectation of success in practicing the instant invention by varying the process conditions (batch/continuous, concentration of the base, reactants, temperature and pressure) from the teaching of Yates to arrive at the instantly claimed method for making silica sol by reacting guanidine compound with a sol in the presence of a base. Said person would have been motivated to practice the teaching of the reference cited because it demonstrate that silica sol are useful industrial raw materials. The Examiner notes that variation the reaction conditions, for example, batch/continuous, concentration of the reactants, catalyst, temperature and pressure in a chemical reaction is a well-known chemical practice to optimize the process efficiency of the system and does not constitute a patentable distinction. Therefore, the instantly claimed invention would therefore have been obvious to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman k. Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chukwuma O. Nwaonicha, Ph.D.
Patent Examiner
Art Unit: 1621

THURMAN K. PAGE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

Thurman Page,
Supervisory Patent Examiner,
Technology Center 1600